

respectfully submit that claims 1-10 recite subject matter that is neither disclosed nor suggested in Park.

Claim 1 recites an anti-static film for a display that includes a hard coat layer provided on the surface of a transparent substrate directly or via another layer. The hard coat layer contains at least resin, conductive material, and low refractive index material and has a surface electric resistance of  $1.0 \times 10^{11} \Omega/\square$  or less. The Y value thereof obtained by 5 degree specular reflectance is 4.0% or less.

In making this rejection, the Office Action took the position that Park discloses all of the elements of the claimed invention. However, it is respectfully submitted that the prior art fails to disclose or suggest the structure of the claimed invention, and therefore, fails to provide the advantages of the present invention. For example, the hard coat layer of the present invention is configured to have a surface electric resistance of  $1.0 \times 10^{11} \Omega/\square$  or less, and a Y value thereof obtained by 5 degree specular reflectance of 4.0% or less is obtained.

As a result of the claimed configuration, an anti-static film is provided with a hard coat layer having superior optical and physical properties, and anti-static properties are maintained. Additionally, reflectivity is reduced and interference unevenness is prevented.

Park discloses coating compositions having anti-reflective and anti-static properties. Fig. 1 illustrates a multilayer structure composite coating over an organic substrate 10. Hardcoat layer 11 overlies the surface of substrate 10. Layer 12 overlies hardcoat layer 11. Overlying layer 12 is a second layer 13. By controlling the thickness of the individual layers of the composite coating, a desired anti-reflective property of the

coating is achieved. The method of Park deposits a composition having a well controlled thickness of the individual layers and refractive index, thereby inhibiting minimum reflectance at a predetermined wavelength. Fig. 2 of Park shows the reflectance of an embodiment of the composition over a wavelength range of 450-750 nanometers. Optical measurements of reflectance or transmittance were made using a spectrophotometer equipped with a 5-degree specular reflectance accessory.

However, contrary to the present invention, the composite coating of Park is constructed by coating a high index first layer including ITO and a low index second layer including SiO<sub>2</sub>, in this order, on a hard coat layer. Therefore, the composite coating disclosed by Park has a multilayer structure that is different from the structure of the anti-static film of the present invention in which ITO and SiO<sub>2</sub> are dispersed in resin of the hard coat layer to form a monolayer structure. Consequently, the composite coating of Park, because of the multilayer structure, cannot obtain superior adhesive properties between the hard coat layer and the substrate, which is advantageously obtained by the anti-static film of the present invention.

Additionally, the Y value recited in claim 1 of the present invention is calculated from 5 degree specular reflectance at a wavelength range of 400 to 700 nm, and the Y value obtained is 4% or less, as described in an evaluation method in examples of specification.

However, in Park, the Y value in the present invention is not completely been described. Furthermore, Fig. 2 of Park shows reflectance of the composite coating which coats the high index first layer including ITO and the low index second layer including SiO<sub>2</sub> on a hard coat layer in this order. That is, the reflectance shown in Fig. 2

is a wavelength characteristic of the surface of the low index second layer, and it is completely different from the reflectance of the hard coat layer of the present invention, which has a monolayer structure containing a conductive material and low refractive index material in the resin. In addition, Fig. 2 of Park shows reflectance measured at wavelength range of 450 to 750 nm and does not show reflectance at wavelength range of 400 to 450 nm which is used for obtaining the Y value in the present invention.

Therefore, the Y value of the monolayer structure of the anti-static film of the present invention, which is calculated from 5 degree specular reflectance at a wavelength range of 400 to 700 nm, is not easily obtained from the reflectance at a wavelength range of 450 to 750 nm of the composite coating disclosed in Park having a multilayer structure.

The Office Action took the position that although Park does not explicitly disclose the exact range of surface electrical resistance and the exact range of Y value obtained by 5-degree specular reflectance, the ranges taught by Park are within respective claimed ranges, as shown in Fig. 2 of Park. Therefore, it would have been obvious to one of ordinary skill in the art to use the claimed ranges of the present invention for surface electrical resistance and 5-degree specular reflectance. However, the Office Action has failed provide motivation as to why one of ordinary skill in the art would be compelled to make such a modification. Therefore, Applicants submit that this is impermissible hindsight because the only rationale for making such a combination was gleaned only from Applicants' specification.

Additionally, upon review of Applicants' specification, it is discussed that when the surface electric resistance of the hard coat layer exceeds  $1.0 \times 10^{11}$  ohms per

square, a superior anti-static property is not obtained, and in addition, when the Y value exceeds 4.0%, a problem occurs in which interference unevenness is substantial. Therefore, Applicants' specification attributes a specific purpose to these ranges, and thus, these ranges are not mere design choices.

Thus, as discussed above, Applicants submit that Park fails to disclose or suggest an anti-static film for a display that includes a hard coat layer containing at least resin, conductive material, and low refractive index material and has a surface electric resistance of  $1.0 \times 10^{11} \Omega/\square$  or less, where the Y value thereof obtained by 5 degree specular reflectance is 4.0% or less, as recited in claim 1.

Claim 3 of the present invention further recites that the low refractive index material is contained at 15 to 200 weight parts to 100 weight parts of the conductive material. When the mixing ratio is below 15 weight parts, refractive index of the hard coat layer is insufficiently lowered, and therefore interference unevenness cannot be improved.

The Office Action took the position that Park discloses an anti-static film with a low refractive index material contained at 1.4 wt % to 2.3 wt %, which is comparable to Applicants' 15 to 200 weight parts to 100 weight parts. The Office Action referred to Table 1 in column 8 of Park as disclosing these limitations. However, upon review of these sections of Park, it is unclear as to where the percentage of the conductive material is disclosed. Further, the mixing ratio between low refractive index material and conductive material specified in the present invention is not addressed by Park since the composite coating disclosed by Park contains low refractive index material and conductive material in different layers, respectively.

Additionally, upon review of Applicants' specification, it is discussed that a mixing ratio of the low refractive index material is preferably 15 to 200 weight parts and more preferably 20 to 100 weight parts, to 100 weight parts of the conductive material. This is done because when the mixing ratio is below 15 weight parts, reflectivity of the hard coat layer is insufficiently lowered, and therefore, interference unevenness can be improved. Furthermore, when the mixing ratio exceeds 200 weight parts, although interference unevenness is improved, the anti-static property is inferior by lowering an effect of the conductive material, and therefore, problems occur in which the haze value of the hard coat layer is increased and physical properties are lowered. Therefore, as discussed above, Applicants' specification attributes a specific purpose for these ranges, and therefore, these are not mere design choices.

Thus, it is respectfully submitted that the Applicants' invention, as set forth in claims 1 and 3, are not obvious within the meaning of 35 U.S.C. § 103.

Still further, as claims 2, and 4-10 depend directly or indirectly from claim 1, Applicants respectfully submit that each of these claims incorporate the patentable aspects thereof, and are therefore allowable for at least same reasons as discussed above.

Claims 11-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Park, as applied to claims 1, 2, 3, 4 and 7, in view of Hahn et al. (U.S. Patent No. 4,422,721, "Hahn"). In making this rejection, the Office Action took the position that Park discloses all the elements of the claimed invention, except for disclosing a film where an adhesion layer is further provided on a surface of said transparent substrate,

in which the hard coat layer is not provided, and that at least two layers of said layers are colored, said colors being made to be achromatic by mixing.

As will be discussed below, Applicants respectfully submit that claims 11-15 recite subject matter that is neither disclosed nor suggested by any combination of the prior art.

The Office Action took the position that it would have been obvious to one of ordinary skill in the art to modify Park with an additional colored layer, as taught by Hahn, to compensate for the color of the conductive material in order to maintain achromatic low reflectivity. However, upon review of Hahn, it does not appear that the coating is on a surface in which the hard coat layer is not provided. Therefore, it is unclear as to where it is disclosed that an adhesion layer is provided on a surface, in which said hard coat layer is not provided, of said transparent substrate, wherein at least two layers of said layers are colored, and said colors are made to be achromatic by mixing, as recited in claims 11-15.

In contrast, Hahn discloses an optical article having a conductive anti-reflection coating. As shown in Fig. 5, a coating 54 comprised of conducting layer 61 as an outer layer to the conventional HEA coating, has an adjustment in the thickness of the magnesium fluoride layer to compensate for ITO layer, so as to maintain achromatic low reflectivity in the visible spectrum. Further, Hahn does not cure above noted deficiencies of Park.

Therefore, as discussed above, Applicants submit that Park and Hahn, either alone or in combination, fail to disclose or suggest disclosed that an adhesion layer is provided on a surface, in which said hard coat layer is not provided, of said transparent

substrate, wherein at least two layers of said layers are colored, and said colors are made to be achromatic by mixing, as recited in claims 11-15.

Additionally, as claims 11-15 depend directly or indirectly from claim 1, Applicants respectfully submit that each of these claims incorporate the patentable aspects thereof, and are therefore allowable for at least same reasons as discussed above.

Therefore, it is respectfully submitted that the Applicants' invention, as set forth in claims 11-15, is not obvious in view of any combination of Park and Hahn, within the meaning of 35 U.S.C. § 103.

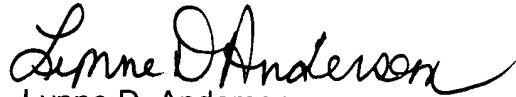
In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of claims 1-15, and the prompt issuance of a Notice of Allowability are respectfully solicited.

If this application is not in condition for allowance, the Examiner is requested to contact the undersigned at the telephone listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time.

Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 108421-00013.**

Respectfully submitted,  
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